

**What is claimed is:**

1           1.       A method of generating a plurality of custom browse hierarchies each  
2 representative of a unique subset of items, said method comprising:  
3           for each leaf node of a primary hierarchy representative of the items:  
4           establishing a search rule that comprises an aggregation of constraints specified by the  
5           leaf node and its ancestors; and  
6           identifying all of the unique subsets that contain at least one of the items meeting the  
7           aggregation of constraints; and  
8                        creating a custom browse hierarchy for each of the unique  
9           subsets, said creating further comprising retaining in the custom  
10          browse hierarchy only those leaf nodes, and their ancestors, from the  
11          primary hierarchy for which the unique subset has been identified by  
12          said identifying.

1           2.       The method of Claim 1 wherein each of the unique subsets are identified by a  
2 different subset ID, each of the items are stored in a database and each of the items  
3 comprising each of the unique subsets is stored in an entry of a subset ID table, the entry  
4 further containing the subset ID that identifies the unique subset to which the item belongs,  
5 said identifying further comprising:  
6           executing a search of the database to identify each of the items in the database that  
7           meet the constraints; and  
8           for each of the items identified by said executing a search, performing a table join  
9           between the identified item and the subset ID table to return a list of all subset  
10          IDs that are stored in an entry of the subset ID table with the identified item.

1           3.       The method of Claim 2 wherein said retaining further comprises:  
2           for each leaf node of the primary hierarchy:  
3           locating a next unprocessed leaf node of the primary hierarchy;  
4           retrieving the returned list of all subset IDs for the next unprocessed leaf node; and

5 cloning the next unprocessed leaf node and its ancestors into the custom browse  
6 hierarchy if the subset ID identifying the unique subset is contained in the  
7 returned list of all subset IDs for the unprocessed leaf node.

1 4. The method of Claim 2 wherein said executing a search further comprises:  
2 translating the search rule to a database query;  
3 issuing the database query to a database server coupled to the database; and  
4 wherein the database server executes the search and performs the table join in  
5 accordance with the database query.

01 5. The method of Claim 4 wherein said translating the search rule to a database  
02 query is performed by an application program being executed on an application server.

03 6. The method of Claim 2 wherein the items are products or services, and the  
04 items are represented by catalog data stored in the database, the catalog data comprising a  
05 unique product identifier, one or more attributes, a unique value for each of the attributes, and  
06 associated descriptive information.

07 7. The method of Claim 1 wherein each of the unique subsets of items comprises  
08 a custom catalog, and wherein the custom browse hierarchy generated for each of the unique  
09 subsets is operable to browse the custom catalog.

1 8. The method of Claim 2 wherein said creating further comprises identifying  
2 each custom browse hierarchy with the subset ID used to identify the unique subset for which  
3 the custom browse hierarchy is created, said method further comprising:  
4 providing the custom browse hierarchy identified by the subset ID for display on a  
5 terminal having access to the database in response to a request identified by  
6 the subset ID.

1 9. The method of Claim 8 wherein said providing further comprises:  
2 formatting the created custom browse hierarchy as one or more web pages; and  
3 transmitting the web pages over the Internet for display on the terminal using a web  
4 browser.

1 10. The method of Claim 8 further comprising:  
2 formatting one or more copies of the created custom browse hierarchy; and  
3 exporting each formatted copy to an entity associated with the subset ID.

1 11. An apparatus for generating a plurality of custom browse hierarchies each  
2 representative of a unique subset of items, said method comprising:  
3 for each leaf node of a primary hierarchy representative of the items:  
4 means for establishing a search rule that comprises an aggregation of constraints  
5 specified by the leaf node and its ancestors; and  
6 means for identifying all of the unique subsets that contain at least one of the items  
7 meeting the aggregation of constraints; and  
8 means for creating a custom browse hierarchy for each of the unique subsets, said  
9 means for creating further comprising means for retaining in the custom  
10 browse hierarchy only those leaf nodes, and their ancestors, from the primary  
11 hierarchy for which the unique subset has been identified by said identifying  
12 means.

1 12. The apparatus of Claim 11 wherein each of the unique subsets are identified  
2 by a different subset ID, each of the items are stored in a database and each of the items  
3 comprising each of the unique subsets is stored in an entry of a subset ID table, the entry  
4 further containing the subset ID that identifies the unique subset to which the item belongs,  
5 said means for identifying further comprising:  
6 means for executing a search of the database to identify each of the items in the  
7 database that meet the constraints; and  
8 for each of the items identified by said executing a search, means for performing a  
9 table join between the identified item and the subset ID table to return a list of  
10 all subset IDs that are stored in an entry of the subset ID table with the  
11 identified item.

1 13. The apparatus of Claim 12 wherein said means for retaining further comprises:  
2 for each leaf node of the primary hierarchy:  
3 means for locating a next unprocessed leaf node of the primary hierarchy;

4 means for retrieving the returned list of all subset IDs for the next unprocessed leaf  
5 node; and  
6 means for cloning the next unprocessed leaf node and its ancestors into the custom  
7 browse hierarchy if the subset ID identifying the unique subset is contained in  
8 the returned list of all subset IDs for the unprocessed leaf node.

1 14. The apparatus of Claim 12 wherein said means for executing a search further  
2 comprises:

3 means for translating the search rule to a database query;  
4 means for issuing the database query to a database server coupled to the database; and  
5 wherein the database server executes the search and performs the table join in  
6 accordance with the database query.

1 15. The apparatus of Claim 14 wherein said means for translating the search rule to  
2 a database query is performed by an application program being executed on an application  
3 server.

1 16. The apparatus of Claim 12 wherein the items are products or services, and the  
2 items are represented by catalog data stored in the database, the catalog data comprising a  
3 unique product identifier, one or more attributes, a unique value for each of the attributes, and  
4 associated descriptive information.

1 17. The apparatus of Claim 11 wherein each of the unique subsets of items  
2 comprises a custom catalog, and wherein the custom browse hierarchy generated for each of  
3 the unique subsets is operable to browse the custom catalog.

1 18. The apparatus of Claim 12 wherein said means for creating further comprises  
2 means for identifying each custom browse hierarchy with the subset ID used to identify the  
3 unique subset for which the custom browse hierarchy is created, said apparatus further  
4 comprising:

5 means for providing the custom browse hierarchy identified by the subset ID for  
6 display on a terminal having access to the database in response to a request  
7 identified by the subset ID.

1           19.     The apparatus of Claim 18 wherein said means for providing further  
2 comprises:  
3           means for formatting the created custom browse hierarchy as one or more web pages;  
4           and  
5           means for transmitting the web pages over the Internet for display on the terminal  
6           using a web browser.

1           20.     The apparatus of Claim 18 further comprising:  
2           means for formatting one or more copies of the created custom browse hierarchy; and  
3           means for exporting each formatted copy to an entity associated with the subset ID.

4           21.     A computer program product for generating a plurality of custom browse  
5 hierarchies each representative of a unique subset of items, said computer program product  
6 comprising:  
7           a computer-readable storage medium; and  
8           program instructions stored on said storage medium for:  
9           for each leaf node of a primary hierarchy representative of the items:  
10          establishing a search rule that comprises an aggregation of constraints specified by the  
11          leaf node and its ancestors; and  
12          identifying all of the unique subsets that contain at least one of the items meeting the  
13          aggregation of constraints; and  
14          creating a custom browse hierarchy for each of the unique subsets, said creating  
            further comprising retaining in the custom browse hierarchy only those leaf  
            nodes, and their ancestors, from the primary hierarchy for which the unique  
            subset has been identified by said identifying.

1           22.     The computer program product of Claim 21 wherein each of the unique  
2 subsets are identified by a different subset ID, each of the items are stored in a database and  
3 each of the items comprising each of the unique subsets is stored in an entry of a subset ID  
4 table, the entry further containing the subset ID that identifies the unique subset to which the  
5 item belongs, said program instructions further for:

6           executing a search of the database to identify each of the items in the database that  
7           meet the constraints; and

8           for each of the items identified by said executing a search, performing a table join  
9           between the identified item and the subset ID table to return a list of all subset  
10          IDs that are stored in an entry of the subset ID table with the identified item.

1           23.     The computer program product of Claim 22 wherein said program instructions  
2 are further for:

3           for each leaf node of the primary hierarchy:

4           locating a next unprocessed leaf node of the primary hierarchy;

5           retrieving the returned list of all subset IDs for the next unprocessed leaf node; and

6           cloning the next unprocessed leaf node and its ancestors into the custom browse

7           hierarchy if the subset ID identifying the unique subset is contained in the

8           returned list of all subset IDs for the unprocessed leaf node.

1           24.     The computer program product of Claim 22 wherein said program instructions  
2 are further for:

3           translating the search rule to a database query;

4           issuing the database query to a database server coupled to the database; and

5           wherein the database server executes the search and performs the table join in

6           accordance with the database query.

1           25.     The computer program product of Claim 24 wherein said program instructions  
2 for translating the search rule to a database query comprise an application program being  
3 executed on an application server.

1           26.     The computer program product of Claim 22 wherein the items are products or  
2 services, and the items are represented by catalog data stored in the database, the catalog data  
3 comprising a unique product identifier, one or more attributes, a unique value for each of the  
4 attributes, and associated descriptive information.

1           27.     The computer program product of Claim 21 wherein each of the unique  
2 subsets of items comprises a custom catalog, and wherein the custom browse hierarchy  
3 generated for each of the unique subsets is operable to browse the custom catalog.

1           28.     The computer program product of Claim 22 wherein said program instructions  
2 are further for identifying each custom browse hierarchy with the subset ID used to identify  
3 the unique subset for which the custom browse hierarchy is created, said program instructions  
4 further for:

5                 providing the custom browse hierarchy identified by the subset ID for display on a  
6                         terminal having access to the database in response to a request identified by  
7                         the subset ID.

1           29.     The computer program product of Claim 28 wherein said program instructions  
2 are further for:

3                 formatting the created custom browse hierarchy as one or more web pages; and  
4                 transmitting the web pages over the Internet for display on the terminal using a web  
5                         browser.

1           30.     The computer program product of Claim 28 further comprising program  
2 instructions for:

3                 formatting one or more copies of the created custom browse hierarchy; and  
4                 exporting each formatted copy to an entity associated with the subset ID.

1           31.     A computer system for generating a plurality of custom browse hierarchies  
2 each representative of a unique subset of items, said computer system comprising:

3                 a memory means for storing program instructions for:  
4                         for each leaf node of a primary hierarchy representative of the items:

5 establishing a search rule that comprises an aggregation of constraints specified by the  
6 leaf node and its ancestors; and  
7 identifying all of the unique subsets that contain at least one of the items meeting the  
8 aggregation of constraints; and  
9 creating a custom browse hierarchy for each of the unique subsets, said creating  
10 further comprising retaining in the custom browse hierarchy only those leaf  
11 nodes, and their ancestors, from the primary hierarchy for which the unique  
12 subset has been identified by said identifying; and  
13 means for processing said program instructions.

0001 32. The computer system of Claim 31 wherein each of the unique subsets are  
0002 identified by a different subset ID, each of the items are stored in a database and each of the  
0003 items comprising each of the unique subsets is stored in an entry of a subset ID table, the  
0004 entry further containing the subset ID that identifies the unique subset to which the item  
0005 belongs, said program instructions further for:

0006 executing a search of the database to identify each of the items in the database that  
0007 meet the constraints; and  
0008 for each of the items identified by said executing a search, performing a table join  
0009 between the identified item and the subset ID table to return a list of all subset  
0010 IDs that are stored in an entry of the subset ID table with the identified item.

1 33. The computer system of Claim 32 wherein said program instructions are  
2 further for:

3 for each leaf node of the primary hierarchy:  
4 locating a next unprocessed leaf node of the primary hierarchy;  
5 retrieving the returned list of all subset IDs for the next unprocessed leaf node; and  
6 cloning the next unprocessed leaf node and its ancestors into the custom browse  
7 hierarchy if the subset ID identifying the unique subset is contained in the  
8 returned list of all subset IDs for the unprocessed leaf node.

1 34. A custom browse hierarchy representative of a unique subset of items, said  
2 custom browse hierarchy generated by:

3 for each leaf node of a primary hierarchy representative of the items:



4 establishing a search rule that comprises an aggregation of constraints specified by the  
5 leaf node and its ancestors; and  
6 identifying all of the unique subsets that contain at least one of the items meeting the  
7 aggregation of constraints; and  
8 creating a custom browse hierarchy for the unique subset, said creating further  
9 comprising retaining in the custom browse hierarchy only those leaf nodes,  
10 and their ancestors, from the primary hierarchy for which the unique subset  
11 has been identified by said identifying.

1 35. The custom browse hierarchy of Claim 34 wherein the unique subset is  
2 identified by a unique subset ID, each of the items is stored in a database and each of the  
3 items comprising the unique subset is stored in an entry of a subset ID table, the entry further  
4 containing the subset ID that identifies the unique subset, said identifying further comprising:  
5 executing a search of the database to identify each of the items in the database that  
6 meet the constraints; and  
7 for each of the items identified by said executing a search, performing a table join  
8 between the identified item and the subset ID table to return a list of all subset  
9 IDs that are stored in an entry of the subset ID table with the identified item.

1 36. The custom browse hierarchy of Claim 35 wherein said retaining further  
2 comprises:  
3 for each leaf node of the primary hierarchy:  
4 locating a next unprocessed leaf node of the primary hierarchy;  
5 retrieving the returned list of all subset IDs for the next unprocessed leaf node; and  
6 cloning the next unprocessed leaf node and its ancestors into the custom browse  
7 hierarchy if the subset ID identifying the unique subset is contained in the  
8 returned list of all subset IDs for the unprocessed leaf node.